

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1-6. (cancelled)

7. (currently amended) A device ~~(1)~~ for determination of the angular position ~~(a)~~ of a rotating body ~~(2)~~ relative to a support ~~(4)~~, said device comprising:

a rotatable body (2) rotatable about an axis of rotation;

[[•]] a generator (6) of magnetic flux (32) comprising a ring portion at least partially encircling the axis of rotation with an inner edge, an outer edge, and an annular surface between the inner edge and the outer edge, the inner edge connected to the rotating rotatable body and taking the form of a ring or a portion of a ring and comprising alternating poles (10, 12) making up a series of magnets generating magnetic fluxes (32) in substantially parallel directions (30),;

a plurality of thin, rectilinear magnets of substantially equal size (16) arranged on the annular surface as a series of adjacent, alternating poles (10,12) aligned along a rectilinear axis running on the annular surface;

a support(4) proximate to the rotatable body; and

[[•]] a magnetoresistive sensor (8) connected to the

support (4),

~~characterized in that the magnetic flux generator (6)~~  
~~is cut from a strip (14) consisting of a series of lines (16) of~~  
~~a constant width (1) extending in the same direction (18) and~~  
~~constituting said poles~~ wherein the plurality of rectilinear  
magnets generate a plurality of magnetic fluxes in directions  
substantially parallel to the rectilinear axis.

8. (currently amended) The device as claimed in claim 7, characterized in that the width (1) of ~~the lines~~ each rectilinear magnet is less than 5 millimeters.

9. (previously presented) The device as claimed in claim 7, characterized in that the magnetic flux generator (6) comprises at least 10 alternating poles (10, 12).

10. (currently amended) The device as claimed in claim 7, characterized in that the ring portion of said magnetic flux generator (6) ~~takes the form of a portion of a ring extending over~~ has an arc of at least 120 degrees.

11. (currently amended) The device as claimed in claim 7, characterized in that the magnetoresistive sensor (8) comprises two magnetoresistive elements (20, 22) offset angularly by 45° and a microcontroller (24) ~~determining~~ configured to

determine the angular position of the ~~rotating~~ rotatable body (2) from [[the]] electrical signals (26, 28) transmitted by said magnetoresistive elements.

12. (previously presented) The device as claimed in claim 8, characterized in that the magnetic flux generator (6) comprises at least 10 alternating poles (10, 12).

13. (currently amended) The device as claimed in claim 9, characterized in that the ring portion of said magnetic flux generator (6) ~~takes the form of a portion of a ring extending over~~ has an arc of at least 120 degrees.

14. (currently amended) The device as claimed in claim 9, characterized in that the magnetoresistive sensor (8) comprises two magnetoresistive elements (20, 22) offset angularly by 45° and a microcontroller (24) ~~determining~~ configured to determine the angular position of the ~~rotating~~ rotatable body (2) from [[the]] electrical signals (26, 28) transmitted by said magnetoresistive elements.

15. (previously presented) The device as claimed in claim 10, characterized in that the magnetoresistive sensor (8) comprises two magnetoresistive elements (20, 22) offset angularly by 45° and a microcontroller (24) ~~determining~~ configured to

determine the angular position of the ~~rotating~~ rotatable body (2) from [[the]] electrical signals (26, 28) transmitted by said magnetoresistive elements.

16. (new) A device for determining a relative angular position of a rotating body, the device comprising:

a support (4);

a rotatable body (2) proximate to said support and rotatable about an axis of rotation;

a ring portion (6) at least partially encircling said rotatable body (2) with an outer edge, an inner edge connected to said rotatable body (2), and an annular surface between the inner edge and the outer edge;

a plurality of magnetized units (16), aligned adjacently along a rectilinear axis on the annular surface and tangential to an arc of rotation of the rotatable body, and arranged such that adjacent edges of the magnetized units have opposite poles (10,12); and

a magnetoresistive sensor (8) attached to said support (4),

wherein an operational rotation of said rotatable body exposes said magnetoresistive sensor to a magnetic flux (32) from said magnetized units and substantially parallel to the direction of the rectilinear axis, thereby causing said magnetoresistive sensor to produce a voltage corresponding to an angular position

of said rotatable body relative to said magnetoresistive sensor on said support.

17. (new) The device as claimed in claim 7, characterized in that the ring portion of said magnetic flux generator (6) has an arc of approximately 135 degrees.

18. (new) The device as claimed in claim 9, characterized in that the ring portion of said magnetic flux generator (6) has an arc of approximately 135 degrees.